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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,652	12/21/2001	Simon Tam	111570	6439

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EXAMINER

ALEMU, EPHREM

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

<b>Application No.</b> 10/023,652	<b>Applicant(s)</b> TAM, SIMON
<b>Examiner</b> Ephrem Alemu	<b>Art Unit</b> 2821

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM

#### THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed

- after SIX (6) MONTHS from the mailing date of this communication.
- the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 21 December 2001.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 December 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .

- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_ .
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other:

## **DETAILED ACTION**

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: "V<sub>DD</sub>" is not included in Fig. 3, as mentioned in page 5, line 6. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

2. Claims 4 and 9 are objected to because of the following informalities:  
(i) claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. The limitation of claim 4, does not further limit the unity gain amplifier that is claimed in claim 2.

(ii) the following limitations lack antecedent basis:

(a) "said capacitor" in claim 4, lines 2-3; and

(b) "the current" in claim 9, line 1.

(iii) in claim 9, line 2, change "an buffer" to --a buffer--. Appropriate correction is

required.

Application/Control Number: 10/023,652

Art Unit: 2821

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 9 are rejected under 35 U.S.C. 112, first paragraph, because claims 1 and 9 are single means claims. See MPEP 2164.08(a).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang (US 6,501,449).

Re claims 1 and 3, Huang discloses a compensated pixel driver circuits (i.e., organic light emitting diode driver, IC1, IC2), wherein the circuit comprises a unity gain buffer (i.e., amplifier 42) (Fig. 6, Col. 3, lines 6- 15 & 24-29; Col. 4, lines 24-35; where in an image quality of a display is improved by controlling the pixel driving currents to be stable and identical).

Re claim 2, Huang further shows the unity gain buffer is implemented as an operational amplifier (42) (Fig. 6; Col. 4, lines 29-31).

Application/Control Number: 10/023,652

Art Unit: 2821

Re claim 9, given Huang's compensated pixel driver circuits (i.e., organic light emitting diode driver, IC1, IC2) as applied above in claim 1, the method of compensating the current to an organic electroluminescent pixel as claimed in claim 9 is inevitable.

Re claim 10, Huang discloses an organic electroluminescent display device (not shown in the figures) comprising one or more compensated pixel driver circuits (i.e., IC1, IC2), wherein the circuit comprises a unity gain buffer (i.e., amplifier 42) (Fig. 6, Col. 3, lines 6- 15 & 24-29; Col. 4, lines 24-35).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 4-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Brownlow et al. (US 6,064,362) in view of Kanemori et al. (US 5,335,102).

Re claims 1, 3 and 10, Brownlow discloses an active matrix display comprising one or more compensated pixel driver circuits wherein each of which comprises a unity gain buffer for the purpose of providing a display in which undesirable effect of leakage currents of semiconductor devices being reduced or eliminated (Figs. 8-11; Col. 5, lines 12-67; Col. 7, line 10- Col. 8, line 16).

Brownlow, however, does not disclose the active matrix display being an organic electroluminescent device.

Art Unit: 2821

Kanemori discloses in liquid crystal display devices, EL display devices, plasma display devices and the like, it is known how to produce a display pattern on a screen by selectively driving pixel electrodes arranged in a matrix pattern. In such display devices, voltage is applied between each selected pixel electrode and a counter electrode disposed facing it, to optically modulate a display medium such as liquid crystal or the like interposed between these electrodes. This optical modulation is recognized as a display pattern. As a method for driving pixel electrodes, an active matrix driving method is known in which independent pixel electrodes are arrayed and are driven via switching elements connected to the respective pixel electrodes (Col. 1, lines 15-36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the compensated pixel driver circuit comprising unity gain buffer of Brownlow's for an organic electroluminescent device since it is well known to the skill of an artisan how to produce a display pattern on a screen by selectively driving pixel electrodes arranged in a matrix pattern as taught by Kanemori's for no other reason improving the image quality of an organic electroluminescent display device.

Re claim 4, Brownlow further discloses a transistor (6<sup>b</sup>); and a hold capacitor(5) (Fig. 8b).

Re claims 5-7, Brownlow further shows the unity gain buffer comprises differential (i.e., transistors 20, 21) and a driver circuit (i.e., transistors 22, 23, 24) amplifier comprises (42) (Fig. 6; Col. 4, lines 29-31; wherein the driver circuit comprises two transistor (i.e., 22, 24) connected in series with the output of the buffer being taken from the connection between these transistors and wherein the differential pair circuit comprises two transistors (i.e., 20, 21) whose gates

respectively provide an inverting input and a non-inverting input of the buffer and further transistor (i.e., 22) whose gate provides a bias voltage input of the buffer).

Re claim 8, Brownlow further teaches the circuit being implemented with polysilicon thin film transistors (Col. 5, line 43-45).

*Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamagishi et al. (US 6,501,466); Wang et al. (US 6,351,078); Dawson et al. (US 6,229,506); Wei et al. (US 5,684,368) and Tatsumi et al. (US 5,519,288); also teach similar inventive subject matter.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (703) 306-5983. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K Wong can be reached on (703) 308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

EA  
1-24-03

*Wilson Lee*  
Patent Examiner